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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,359	12/30/2000	Gary Cao	042390P9473	8440

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EXAMINER

RAO, SHRINIVAS H

ART UNIT PAPER NUMBER

2814

DATE MAILED: 11/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/752,359

Applicant(s)

CAO ET AL.

Examiner

Steven H. Rao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 12-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 May 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

The Application as filed does not currently claim priority from any prior patent application. Therefore presently the earliest available filling date is the U.S. filling date namely December 30, 2000.

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-11, drawn to a structure, classified in class 257, subclass 48/620.
- II. Claims 12-13 drawn to a method of measuring critical dimensions, classified in class 716 subclass 21.
- III. Claims 14-16, drawn to a method, classified in class 382, subclass 209.

Inventions groups I, II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01).

In the instant case the different inventions (groups I, II and III) are unrelated they are not capable of being used together (gr. I requires the second set of features to occupy a smaller area than the first) and they have different modes of operation (no

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extraction step, no scaling step and no merging steps in group I and III, but required in group II, group III requires a storing step not required in groups I and II).

Because these inventions are distinct for the reasons given above and the search required for Groups I, II is not required for Group III, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Michael A. Bernadicou and Examiner Christopher T. Sukhaphadhana on 28, October 2003 a provisional election was made with traverse to prosecute the invention of group I, claims 1-11

Affirmation of this election must be made by applicant in replying to this Office action.

Claims 12- 16 have been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satya et al. (U.S. Patent No. 6,528,818, herein after Satya) in view of Gallarada et al. (U.S. Patent No. 6,539,106 herein after Gallarda) .

With respect to claim 1 Satya describes a structure comprising: a first set of features disposed in the scribe line, (Satya abstract line 2-4) said first set of features being a subset of product features; (Satya figure 27, etc.) and , a second set of features disposed adjacent to said first set of features, (Satya abstract lines 6-8) .

Satya does not specifically mention or describe the second set of features occupying a smaller area than the first set.

However Gallarda in figure 5 #536 compared with other structures (526-534) describes the second set of features occupying a smaller area than the first set so that the tester (observer) can quickly and efficiently distinguish between defects that reduce reliability of the device (killer defects) and a surface or image artifact which is not of interest and does not effect overall reliability of the device, which are placed in smaller/larger areas .

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include Gallarda's second set occupying a smaller area than said first set, in Satya's device so that the tester (observer) can quickly and efficiently distinguish between defects that reduce reliability of the device (killer defects) and a

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surface or image artifact which is not of interest and does not effect overall reliability of the device, which are placed in smaller/larger areas .

The remaining limitations of claim 1 are :

second set being similar to said first set, (Gallarda figure 5, etc.) said second set being distinguishable from surrounding structures. (Satya Abstract last two lines).

With respect to claim 2 Satya describes the structure of claim 1 wherein critical dimension (CD) is measured on said first set of features. (Stay figure 2, col. 8 lines 15-22).

With respect to claim 3 Satya describes the structure of claim 1 wherein said first set of features and said second set of features differ in spaces between features. (Staya figure 4D # 216 and 214)

With respect to claim 4 describes the structure of claim 1 wherein said first set of features and said second set of features differ in linewidths of features. (Staya figure 4 D).

With respect to claim 5 describes the structure of claim 1 wherein said first set of features and said second set of features have the same pitch for features. (Satya figure 4C).

With respect to claim 6 describes the structure of claim 1 wherein said first set of features comprises a first array of holes. (Gallarda figure 4, col. 6 lines 36 to 48).

With respect to claim 7 describes the structure of claim 6 wherein said first array of holes comprises a 5 by-5 square array of holes. (Gallarda figure 5).

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With respect to claim 8 describes the structure of claim 6 wherein said second set of features comprises a second array of holes. (Gallarda figure 5).

With respect to claim 9 describes the structure of claim 8 wherein said second array of holes differs from said first array of holes in size of array. (Gallarda figure 5 #536 compared with other structures 526-534).

With respect to claim 10 describes the structure of claim 8 wherein said second array of holes differs from said first array of holes in space between holes. (Gallarda figures 18 A and E)

With respect to claim 11 describes the structure of claim 8 wherein said second array of holes differs from said first array of holes in line widths of holes. (Staya figure 4 D).

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Steven H. Rao whose telephone number is (703) 306-5945. The examiner can normally be reached on Monday- Friday from approximately 7:00 a.m. to 5:30 p.m.

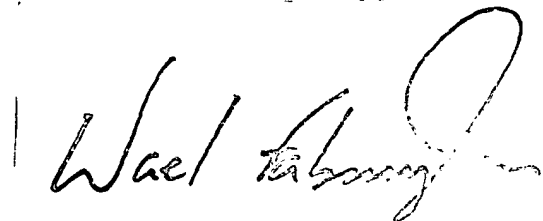
Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956. The Group facsimile number is (703) 308-7724.



Steven H. Rao

Patent Examiner

October 29, 2003.



SUPERVISORY PRIMARY EXAMINER
TECHNOLOGY CENTER 2000